REMARKS

Claim 1 is amended. Claims 1-4, 6-16, 18-28, 33, 36-37 and 49 are pending. Claims 20-22, 31, 38-48 are withdrawn from consideration. Claims 5, 17, 29-32, and 34-35 are cancelled.

No new matter is added with the amendments. Support is found in the specification at least at page 5 lines 10-12, and at page 5 lines 21-22, and in originally filed claims 23-28 and 34.

Rejection under 35 U.S.C. § 112

Claim 1 was rejected under 35 U.S.C. §112, second paragraph because insufficient antecedent basis exists for the limitation "wherein the system minimizes the production of chlorine dioxide formation as compared to if the nitrogenous stabilizer were absent". Claim 1 has been amended to "wherein the system minimizes the production of chlorine dioxide formation as compared to if the ~~nitrogenous stabilizer~~ salt of sulfamic acid were absent"

Applicants believe the above-described claim amendment renders moot the rejection under 35 U.S.C. §112, second paragraph. Applicants request withdrawal of the same.

35 U.S.C. 103

§103 rejection based upon combination of Roozdar (US 5,380,518) in view of Morelli (US 6,524,624)

Claims 1-4, 7-16, 18, 19, 23-28, 33, 36, 37 and 49 were rejected under 35 USC 103 as being unpatentable over Roozdar US 5,380,518 in view of Morelli US 6,524,624. The Office relied upon Roozdar as teaching an aqueous acidic disinfecting system comprising an alkaline aqueous chlorite and a biologically compatible acid. The biologically compatible acid is taught to be a salt of sulfamic acid. Roozdar teaches generation of chlorine dioxide but it is not integral to the invention. Roozdar does not teach inclusion of an oxidizable colorant. Morelli was relied upon as teaching an oxidizable colorant in a two-part aqueous acid disinfecting system and that such an oxidizable colorant is degraded by chlorine dioxide generated in the disinfectant. The Office argued that it would have been obvious to include an oxidizable colorant as taught by Morelli in a composition of Roozdar and to exclude the disproportionation agent from the composition of Roozdar to decrease the formation of chloride dioxide thereby preventing the degradation of the colorant. The Office continued that it would have been obvious to combine the chlorite solution and sulfamic acid solution or Roozdar (generate the disinfecting composition of Roozdar) and then let this mixture sit to allow the formed chloride dioxide gas to evaporate prior to the addition of the oxidizable colorant solution of Morelli thereby reducing the amount of chloride dioxide present and inhibiting degradation of the colorant.

Applicants traverse this rejection. First, the problem solved by Applicants' invention would not be solved by excluding the disproportionation agent as suggested by the Office. Simple acidified chlorite formulations would face a rapid color loss unsuitable for a teat dip composition. Second, the claims now include that the first part is alkaline and the second part is acidic and that both parts are aqueous. The sulfamic acid is present in the *alkaline part*. This feature is not taught or suggested by the art nor is the benefit of placing the sulfamic acid in the aqueous alkaline part recognized by the art. The art describes the use of sulfamic acid as *an acid*. Roozdar discusses using the salt of sulfamic acid for metal corrosion concerns, but fails to recognize that if the salt of sulfamic acid is placed in the acidic part of the two-part chemistries, the sulfamic acid will degrade to ammonium sulfate and no longer offer those corrosion prevention benefits.

The art fails to recognize the shelf-instability of sulfamic acid in aqueous based formulations and the need to place it in the alkaline chlorite part. The art further fails to recognize placing acidified chlorite with sulfamic salt in the *alkaline part* along with an oxidizable colorant and *in the absence* of a nonoxidizable colorant. If the sulfamic acid is placed in the acidic part, it will rapidly break down to ammonium sulfate and the technical benefits of using the sulfamic acid will disappear. That is, sulfamic acid is surprisingly stable in an alkaline aqueous solution. Applicants have specifically claimed this advantage that is unrecognized by the art.

The Office stated that a skilled artisan would have been motivated to first combine the chlorite solution and sulfamic acid solution of Roozdar, i.e., generate the disinfecting composition of Roozdar, and then let this mixture sit to allow the formed chloride dioxide gas to evaporate prior to the addition of the oxidizable colorant solution of Morelli thereby reducing the amount of chloride dioxide present and inhibiting the degradation of the colorant. The Office's hypothetical does not solve the problem achieved by the presently claimed invention. That is, the acidified sodium chlorite system is designed to continuously generate chlorine dioxide to act as a disinfectant and it is the control of the rate of chlorine dioxide generation that extends color longevity. The Office's hypothetical fails to overcome the problem presented by an acidified sodium chlorite system. Applicants are unaware of any art disclosing, teaching or suggesting such an invention and request withdrawal of the obviousness rejection based upon Roozdar and Morelli.

§ 103 rejection based upon Richter (US 6,379,685) in view of Morelli et al. and Kolar and Lindgren

Claims 1-4, 7-16, 18, 19, 23-28, 33, 36, 37, and 49 were rejected as being obvious over Richter in view of Morelli et al. and Kolar and Lindgren. Regarding Claim 1, Richter was relied upon as teaching a two-part aqueous chlorite (sodium chlorite) and the second part comprises an aqueous acid (lactic acid) and an oxidizable colorant. The Office contends that Richter does not contain nonoxidizable colorants. Morelli et al. were relied upon to teach that oxidizable colorants are degraded by chlorine dioxide generated upon the mixing of the acid activator with the chlorite in a two-part disinfectant. Kolar and Lindgren were relied upon to teach that the addition of sulfamic acid to the reaction prevents the formation of chlorine dioxide from chlorite. The Office Action stated that it would have been obvious to one of ordinary skill in the art at the time of the invention to include sulfamic acid in the chlorite- containing solution in the composition of Richter to prevent the formation of chloride dioxide from the chlorite as taught by Kolar and Lindgren, thereby preventing the degradation of the colorant as taught by Morelli et al. The use of sulfamic acid in the composition is considered to render the use of a salt of sulfamic acid obvious because it is sulfamic acid, and not the salt, that has the chlorine-reducing effect.

Applicants traverse the rejection. The Office's characterization of Richter excluding a nonoxidizable colorant is incorrect. Example III of Richter includes PYLAKLOR® Yellow LX-10192 and Permanent Green S-722 (50:50 blend) manufactured by Pylam Products Co. Inc. Neither of these colorants are approved D&C/FD&C colorants as required by Applicants' claims. Moreover, both of the colorants are nonoxidizable colorants. Therefore, Richter is not free of nonoxidizable colorants as suggested by the Office. Applicants' invention requires the *absence* of nonoxidizable colorants that would serve to obscure the degradation of the oxidizable colorant. The combination of references cannot and does not teach or suggest the presently claimed invention. Applicants request withdrawal of the obviousness rejection based upon Richter in view of Morelli et al. and Kolar and Lindgren and allowance of the claims.

Summary

It is submitted that each of the pending claims is in condition for allowance, and notification to that effect is kindly requested. The Examiner is invited to contact the Applicants' primary attorney-of-record, Amy Hoffman, at (651) 795-5852, if it is believed that prosecution of this application may be assisted thereby.

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